

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RPH.P53199WO	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2004/052167	International filing date (day/month/year) 14/09/2004	(Earliest) Priority Date (day/month/year) 19/09/2003
Applicant  WEATHERFORD/LAMB, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 14

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

III

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/052167

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 E21B19/00 E21B33/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E21B F16K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 263 982 B1 (HANNEGAN DON M ET AL) 24 July 2001 (2001-07-24) column 4, line 46 - column 5, line 53; claims 1,5,26; figures 1-8	1,2,5-7, 10,14,18
Y	column 4, line 34 - column 5, line 64; claims 1,26; figures 1-8	3,4,8,9, 11-13, 19,20
Y	US 5 076 364 A (HALE ARTHUR H ET AL) 31 December 1991 (1991-12-31)  column 12, lines 49-55	3,4,8,9, 11-13, 19,20
A	WO 00/52299 A (HARDING RICHARD PATRICK ; HANNEGAN DON M (US); BOURGOYNE DARRYL A (US)) 8 September 2000 (2000-09-08) the whole document  ----- -/--	1-20

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

25 November 2004

Date of mailing of the international search report

02/12/2004

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International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 4 709 900 A (DYHR EINAR)  1 December 1987 (1987-12-01)  the whole document</p> <p>-----</p>	1-20

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/052167

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6263982	B1	24-07-2001	US 6138774 A 31-10-2000
		AU 765178 B2 11-09-2003	
		AU 2818100 A 21-09-2000	
		CA 2363495 A1 08-09-2000	
		EP 1175549 A1 30-01-2002	
		WO 0052300 A1 08-09-2000	
		NO 20013952 A 10-10-2001	
		US 2004178001 A1 16-09-2004	
		US 2001040052 A1 15-11-2001	
		AU 752847 B2 03-10-2002	
		AU 2782299 A 20-09-1999	
		BR 9908418 A 02-01-2002	
		CA 2322287 A1 10-09-1999	
		EP 1060320 A1 20-12-2000	
		NO 20003950 A 24-10-2000	
		WO 9945228 A1 10-09-1999	
US 5076364	A	31-12-1991	NONE
WO 0052299	A	08-09-2000	AU 764993 B2 04-09-2003
		AU 2818300 A 21-09-2000	
		CA 2363132 A1 08-09-2000	
		EP 1157189 A1 28-11-2001	
		WO 0052299 A1 08-09-2000	
		NO 20013953 A 03-10-2001	
		US 2003106712 A1 12-06-2003	
		US 6470975 B1 29-10-2002	
US 4709900	A	01-12-1987	DK 162885 A 12-10-1986
		AT 71442 T 15-01-1992	
		DE 3683309 D1 20-02-1992	
		DK 95886 A 12-10-1986	
		EP 0199669 A2 29-10-1986	
		JP 61290193 A 20-12-1986	
		KR 9207709 B1 15-09-1992	
		NO 860821 A ,B, 13-10-1986	